

**AGUA HEDIONDA**  
**CAULERPA TAXIFOLIA SURVEILLANCE AND ERADICATION**  
**WORK PLAN FOR JULY 22 – 25 and JULY 29-AUGUST 8, 2002**  
**MONDAY TO FRIDAY 7AM-3PM**

**THERE WILL LIKELY BE UNFORSEEN CHANGES TO THIS SCHEDULE.**  
**Please call 760-439-1023 for a recording of daily updates to the schedule.**

Reminders:

- ♣ Fishing is prohibited in the east basin.
- ♣ No unauthorized boat access is permitted in the west basin.
- ♣ Access is limited to the YMCA camp in the central basin.
- ♣ Zone 2 is always closed to unauthorized users and vessels. Zone 2 is located in Snug Harbor, inside the white exclusionary boom.

From July 22 – 25, the *Caulerpa taxifolia* eradication team plans to be working in Zone 3 (jetski zone) in the mornings until 11 AM. This zone will be closed until 11AM, after which this zone is open to jet skis only. Boaters, please do not use this zone to transit from zone to zone. Please use the designated transit corridors. The remainder of the day the team plans to work in Zone 6 (passive use zone). This zone is always closed to motorized vessels and will remain open to passive users at all times. See zone map on following page. Please be aware of the survey boats and SCUBA flags and allow them as much clearance as possible. Our support boats will do their best to clearly indicate the location of the divers as necessary. Divers will be swimming on transects lines from shore to shore across the area.

From July 29 – August 8, the team plans to be working in Zone 5, which is the southern half of the power boat/water ski area. See zone map on following page. This entire zone will be closed from 7AM to 3PM. The zone will be demarcated by round orange buoys. The buoys will be deployed from M-F and will be brought in over the weekend. Although this zone is open after 3PM, most of the buoys will remain in place, with daily removal of only those that impede the flow of boat traffic around both zones.

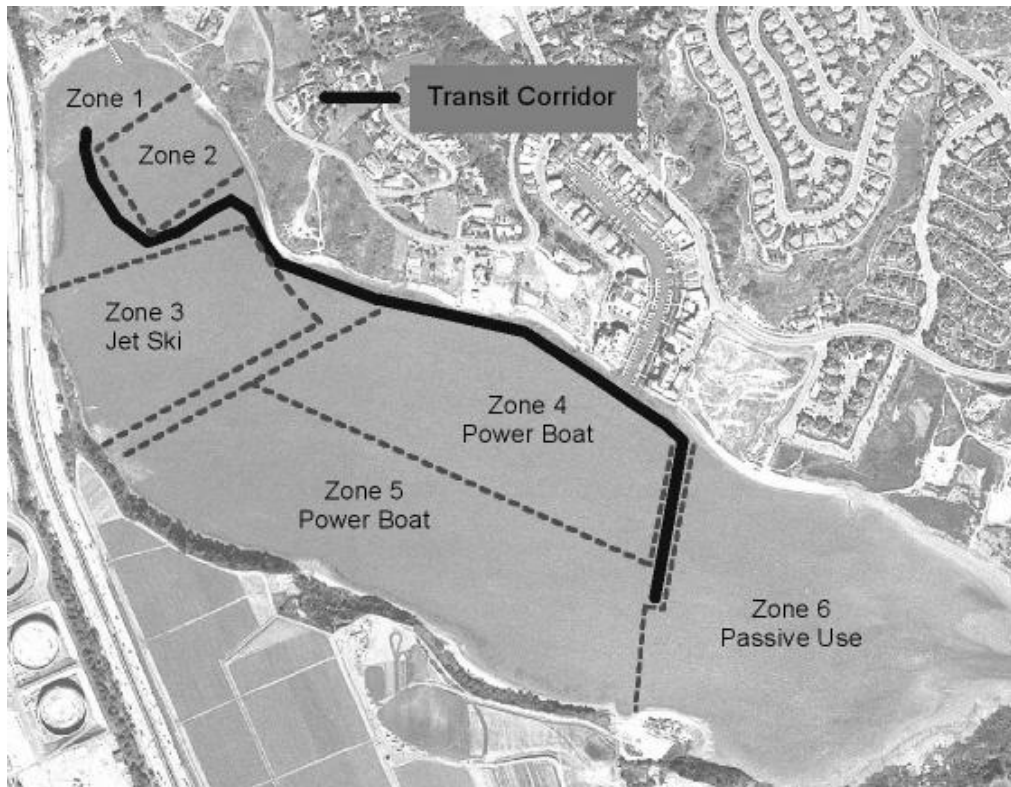
The survey team generally involves a team of SCUBA divers and two tending boats. The boats have flashing lights and fly a SCUBA dive flag when divers are in the water. One tending vessel is always in the immediate vicinity of the submerged divers. The second vessel is generally laying down and picking up survey lines on the lagoon bottom. For your safety and the safety of the divers, please do not pass within 200 feet of any dive flags or tending vessels.

There will likely be variations to the timing of this schedule. **Prior to boating, please call 760-439-1023 for the most up-to-date information.**

Thank you for your continued cooperation and accommodation of the eradication efforts.

Updated 18 July 2002

These are the survey zones outlined in the lagoon Management Plan approved by the Carlsbad City Council on June 11, 2002. Survey work will be conducted in either Zone 4 or 5 at various times throughout the summer, but there are no scheduled closures of both Zones 4 and 5 in June, July, or August.



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## SPRING SURVEY UPDATE

During the Spring 2002 survey of the entire lagoon, four small patches of *Caulerpa taxifolia* were found by divers totaling an area of 5.8 ft<sup>2</sup> at the locations indicated below. The summer survey is underway and will continue throughout the season. Results of the summer survey will be posted upon completion.



**Why do the buoys marking zones 4 and 5 stay out overnight on weeknights?**

Because the deployment and retrieval of the buoys is labor intensive and time consuming, drawing resources away from the surveillance and eradication effort. Buoys will be removed from the ends of the dividing buoy line to allow the flow of boat traffic to use both zones when they are open. Lagoon use rules require boats to operate in a counter-clockwise manner around the basin.

**Why does the eradication crew sometimes anchor their boats when anchoring is prohibited in the lagoon?**

There is a permanent mooring buoy in Zone 2 that was set in July 2000 to facilitate mooring of vessels over the core of the *Caulerpa* infestation. This station is regularly used while we are working in this zone and is an area where we occasionally moor vessels for a few days. Therefore, anchors are not deployed to secure this boat.

However, in other instances, we do anchor boats where we are treating *Caulerpa*. This is a necessary action to maintain position to effectively tend the underwater work. A key point to this is that we have divers place and pull our anchors every time to ensure that there is no *Caulerpa* present when the anchors are placed or pulled. Further, the principal concern regarding anchoring is related to inadvertent spread by anchoring in multiple areas. To avoid this we diligently inspect our anchors for *Caulerpa*. This same consideration has been given to placing and pulling navigational buoys throughout the lagoon, with divers always inspecting moorings before placing or moving buoys.

**If there are so few occurrences of *Caulerpa* in the lagoon now, why does such intensive surveillance need to continue and why is there concern about continued spread of just a few pieces?**

The invasive strain of *Caulerpa taxifolia* spreads asexually by growth and fragmentation. What may start as an initially small patch quickly expands, due to its rapid growth and its ability to establish new patches from very small pieces that have spread from the initial patch. Fragmentation and spread is typically caused by animals, waves, boat anchors and wash from boat engine propellers. Success of the eradication effort relies on the detection of every piece of *Caulerpa* in the lagoon. A small piece that is not treated would quickly expand to a large patch that would in turn contribute additional fragments to the system, leading to vast areas covered only by *Caulerpa*. Continual surveys of the lagoon are scheduled be on-going for several years so that no *Caulerpa* goes undetected.

**For more information about *Caulerpa taxifolia*, click on the Fact Sheet link on the RWQCB website ([www.caulerpa.cjb.net](http://www.caulerpa.cjb.net)).**